Extract Separation and Attachment Lines

INTRODUCTION

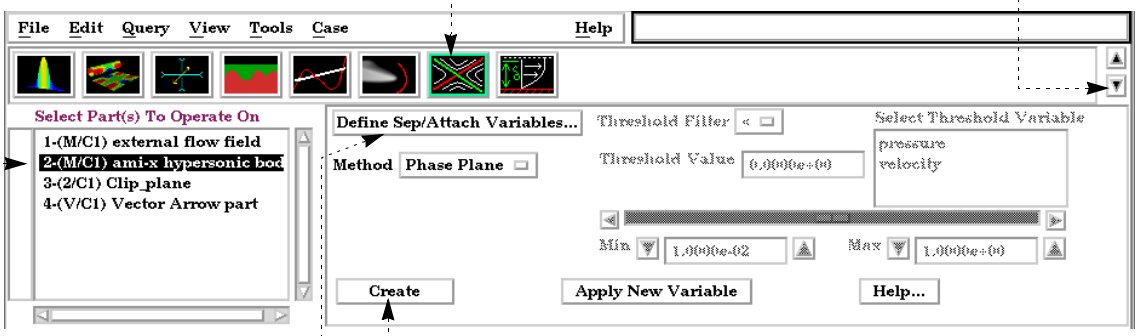
Separation and attachment lines are created on any 2D surface and show interfaces where flow abruptly leaves (separates) or returns (attaches) to the surface. For a more complete description refer to the User Manual section below.

BASIC OPERATION

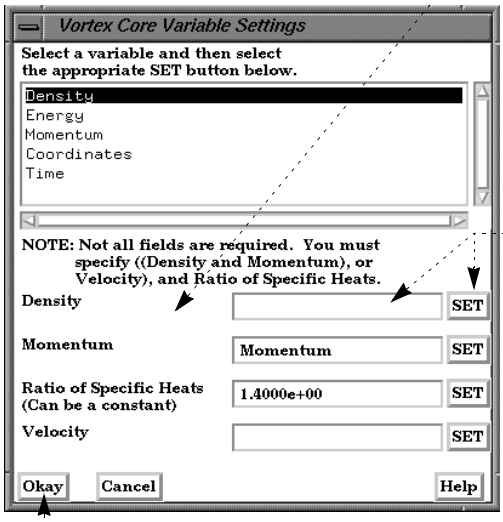
1. Select the 2D parent part.

2. Click the Separation/Attachment part icon.

(Note: This icon is on the second row of icons. Click here if you do not see this icon.)



3. Bring up the dialog defining the necessary variables by clicking here.



4. Define either Density and Momentum or velocity, as well as the Ratio of Specific Heats.

The variables can be set by either typing them into the fields or be selecting them from the list above and clicking the Set button.

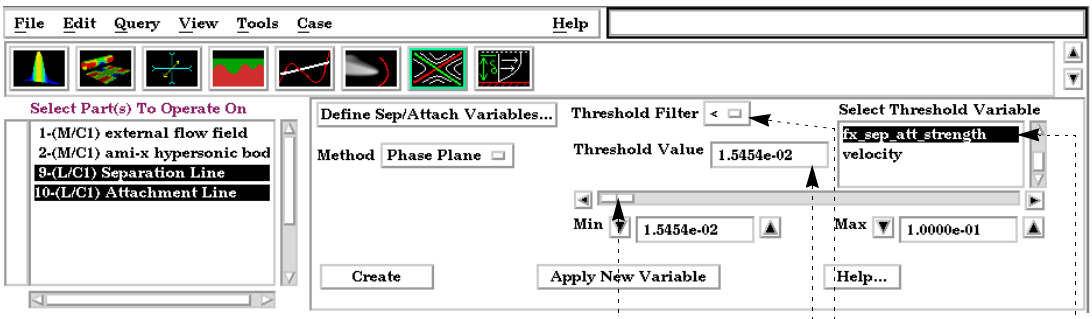
5. Click Okay to finish the variable setup.

6. Click Create

This will create two parts - one each for the separation and attachment lines. You can modify the visual attributes of these parts separately, but when you change any creation attribute, both parts will be modified.

ADVANCED USAGE

The resulting separation/attachment parts can be filtered by the fx_sep_att_strength variable or by any other active variable.



1. Select the variable to filter by.

2. Set the Threshold filter to remove the portion of the separation/attachment line that is larger or smaller than the specified threshold value.

3. Enter a threshold value
- or -
3. Slide the slider to a new threshold value.

OTHER NOTES

The separation and attachment parts are linked together with regard to their creation attributes, i.e. when one is modified the other is also. Further, when one is deleted the other is also deleted.

Separation and Attachment feature extraction only works with one case.

The separation and attachment line parts should generally not interfere visually with the 2D parent parts they lie on (as long as the preference for graphics hardware offset is on - see View Preferences), but they may interfere if printed. In either case you can apply a display offset manually to avoid the interference in the Feature Detail Editor for the part. The display offset will be in the direction of the parent surface normal.

SEE ALSO

User Manual: **Separation/Attachment Lines Create/Update**